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ABSTRACT

This is a workshop designed to help high school change teams increase their understanding of personalized learning and learn ways to adapt existing practices to improve student engagement. The series draws from six years of assisting schools that have been struggling to find ways for their diverse students to meet uniform expectations. It is also based on two earlier studies that form the foundation of the series: (1) a shadowing study of student engagement in seven high schools, "Making Learning Personal: Educational Practices That Work", and (2) a description of five high schools undertaking reform at different levels of organization, "Dynamics of Change in High School Teaching: A Study of Innovation in Five Vermont Professional Development Schools", both published by the Northeast and Islands Regional Educational Laboratory of the Education Alliance at Brown University. (AMT)

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Changing Systems to Personalize Learning
Introduction to the Personalization Workshops

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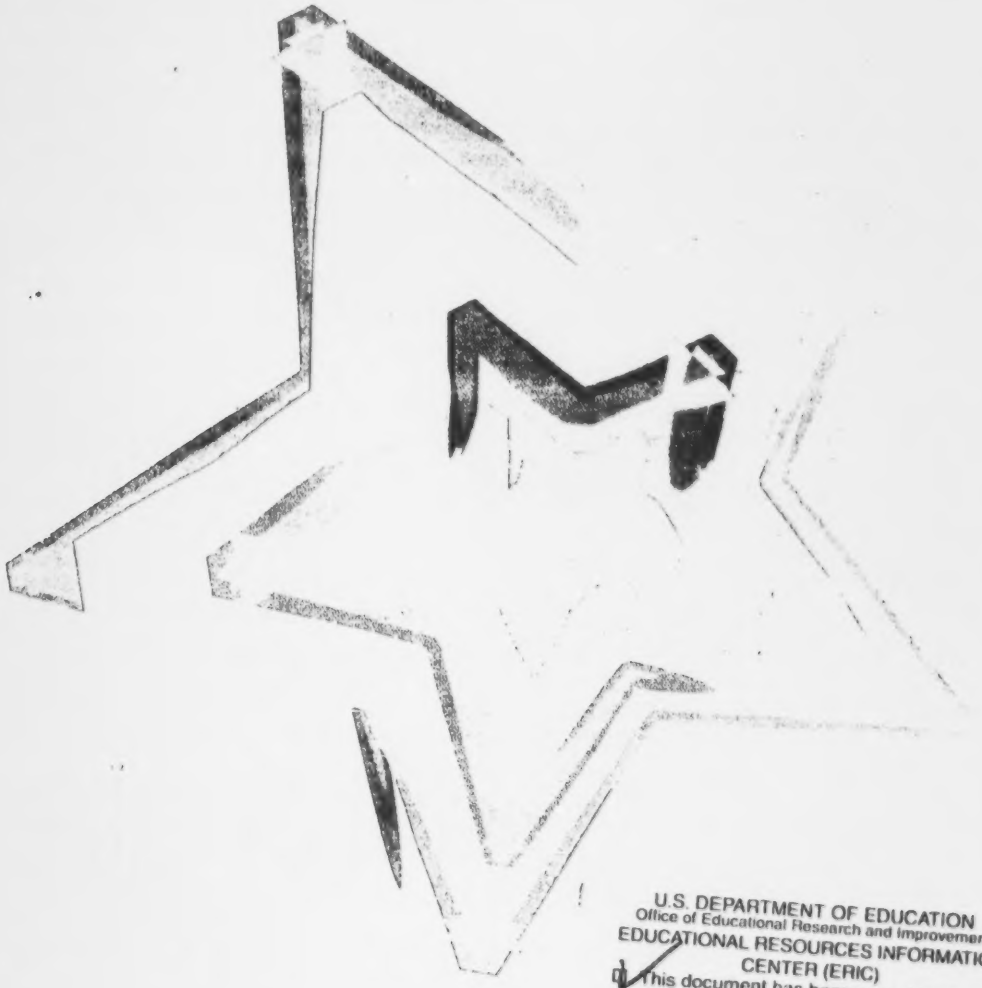

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Changing Systems to Personalize Learning
Introduction to the Personalization Workshops

The Education Alliance at Brown University

Northeast and Islands Regional Educational Laboratory (LAB)

The Education Alliance at Brown University is home to the Northeast and Islands Regional Educational Laboratory (LAB), one of ten educational laboratories funded by the U.S. Department of Education's Institute of Education Sciences. Our goals are to improve teaching and learning, advance school improvement, build capacity for reform, and develop strategic alliances with key members of the region's education and policymaking community.

The LAB develops educational products and services for school administrators, policymakers, teachers, and parents in New England, New York, Puerto Rico, and the Virgin Islands. Central to our efforts is a commitment to equity and excellence.

Information about all Alliance programs and services is available by contacting:

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John H. Clarke, Ed.D., has been a teacher since 1966 and a school development specialist since 1977. While teaching at the University of Vermont, he wrote or edited several books on high school change, focusing on student centered reform. Working with the LAB and the Vermont High School Task Force, John helped develop *High Schools on the Move*, a general guide for school personalization for Vermont High Schools.

Acknowledgments:

This overview of personalized learning serves as an introduction to the six workshops in the *Changing Systems to Personalize Learning* series: Personalized Learning, The Power of Advisories, Teaching to Each Student, Integrating Curriculum to Meet Standards, Flexible Systems and Leadership Roles, and Engaging the Whole Community. The workshops and introductory material are products of applied research and development conducted by the LAB under contract number ED-01-CO-0010 from the U.S. Department of Education as part of the LAB's initiative focusing on Student Centered Learning in high schools. The author thanks the many individuals who offered their review and guidance throughout the development of this material, including Nettie Legters, Bob Greenleaf, John R. Nori, Naomi G. Housman, and members of the Student Centered Learning team: Joseph DiMartino, Denise Wolk, Patti Smith, Ron Millican, Edmund Hamann, Sidney Okashige, and Gregg Sinner.

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Through personalizing both teaching and learning, students can move beyond anonymity to become recognized and invested partners in achieving success in their classrooms.

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Preface

For nearly three decades, the Education Alliance at Brown University has promoted the dual concepts of equity and excellence in America's schools. This work is currently being expanded through its Northeast and Islands Regional Educational Laboratory program to address the inequities that exist for students in typical, comprehensive high schools, including dramatically lower achievement levels and graduation rates for minority students when compared with those of their white counterparts. The National Association of State Boards of Education, in its publication *Most Likely to Succeed: Policymaking in Support of a Restructured High School,* documents this situation well:

> *"National statistics for 2000 show the cumulative dropout rate was 27.8 percent for Hispanic students and 13.1 percent for black students, compared to 6.9 percent for non-Hispanic white students. Among immigrant Hispanic youth, the cumulative dropout rate was a staggering 44.2 percent. Clearly, the comprehensive model high school marginalizes whole groups of students along racial and ethnic lines...For those students who remain in high school, persistent gaps in achievement track along racial and socioeconomic lines. For example, while 20 percent of 17-year-old white students scored at the proficient or advanced level in the NAEP 2000 math assessment, only 3 to 4 percent of African Americans and Hispanics reached similar marks...In fact, by the end of high school, the average reading and math skills of 17-year-old African American and Hispanic students are about the same as those of 13-year-old white students." (NASBE, 2002)*

These inequities are accentuated when the daily routine of high school makes it impossible for teachers to know their students well or to recognize their individual strengths and needs. Such student anonymity is prevalent in most American high schools today and is antithetical to a positive learning experience for students and teachers alike. Through personalizing both teaching and learning, students can move beyond anonymity to become recognized and invested partners in achieving success in their classrooms.

"In high school reform models, learning is student-centered. Every student feels a personal connection to the school and is known well by at least one adult. Students participate in determining how they will meet learning standards and their personal goals" (NASBE, 2002).

Traditional classroom practices in high schools are not designed to meet the variety of learning styles and interests of all students. Just as we believe that learning is personal and different for each student, we believe that culture and climate are different for each school. Therefore, while we are committed to personalizing learning for students, we are also committed to helping school change teams create their own strategies for personalizing learning in their schools.

Changing Systems to Personalize Learning is a series of workshops designed to help high school change teams increase their understanding of personalized learning and learn ways to adapt existing practices to improve student engagement. The series draws from six years of assisting schools that have been struggling to find ways for their diverse students to meet uniform expectations. It is also based on two earlier studies that form the foundation of the series: 1) a shadowing study of student engagement in seven high schools, *Making Learning Personal: Educational Practices That Work* (Clarke, Fraser, DiMartino, Fisher & Smith, 2002) and, 2) a description of five high schools undertaking reform at different levels of organization, *Dynamics of Change in High School Teaching: A Study of Innovation in Five Vermont Professional Development Schools* (Clarke et al., 2000), both published by the Northeast and Islands Regional Educational Laboratory of the Education Alliance at Brown University.

For a discussion of high school personalization at different levels of educational organization, see *Personalized Learning: Preparing Students to Shape their Futures* (DiMartino, Clarke & Wolk, (Eds.), 2002), published by Scarecrow Press, a book that may be used as a companion to the *Changing Systems to Personalize Learning* workshops.

Personalizing High School to Engage Each Student

A day like any other

"I pledge allegiance, to the flag, of the United States of America…" The pledge echoes in homeroom before students take their assigned seats and listen to morning announcements on the PA. Ben learns that PSAT exams are looming. He jots a blurb on the school photo his teacher handed out and half-listens to an Aesop's Fable being read over the intercom, a story about Lion and Mouse, about cooperation. It's weird hair and hat day and the teacher goes around the class counting weird hats in the hopes of winning a homeroom prize for the competition, but most students look the same as usual so it's doubtful there's enough contenders to bid seriously for the award. The bell rings. Ben heads to Communications.

His media teacher wants the class to play back the musical compositions they had created on computer, but the playback machine isn't working. Instead, the teacher asks them to listen and match scales and tones programmed on their MIDI machines, a process known as dictation. Ben has been identified as learning disabled, with clear limitations on his ability to decode symbolic forms. After 20 minutes of dictation, the student at the next MIDI station has racked up 26 points; Ben, with his decoding disability, has none. Still, he hits the keys forcefully with the hope of identifying the notes that appear randomly on his computer screen. Ben writes and plays classical music and has nine years of music training in piano; he has performed Beethoven and Christmas songs at several recitals but no one in school seems to know he plays Beethoven. As the exercise ends, Ben submits no points for his dictation. When the bell rings, he leaves and heads to Marine Biology.

It's a bright and sunny day outside so the class goes on a tour of a local marsh. At several places along the tour, the class stops and listens as the biology teacher describes the indicators of salt and fresh water incursion. She is remarkably knowledgeable about the flora and fauna and the history that shaped their present distribution. No one talks with Ben as they tour the marsh, but other kids find amusing things to do along the road, most of which attract a stern warning. They return to the school as the bell sounds.

In the Learning Center/Resource Room (special education), Ben does some worksheets for his Marine Bio class. After this, he goes to his School-to-Work class, "Journey of Introspection." The blackboard indicates that the group is using the Meyers-Briggs Type indicator to compare learning and thinking styles within the class and to speculate on the fit between individuals and the demands of work. At the teacher's request, two kids explain—without energy—their Meyers-Briggs profiles, as if fearful of response from others. There is no response from teacher or class, though one scores "introverted" and the other "extroverted." The teacher reads a new article on current job pressures and trends. Student heads hit the desk. "The traditional workplace was designed by Ford for mass production, not for people who think on their own—like today's workplace," she reads. No one responds. The teacher turns on a video about Japanese/American conflict in the workplace and the class watches TV until the bell rings.

After lunch, Ben's English class starts with ORBs (outside reading books). Everyone reads independently for 30 minutes, then the teacher hands out the day's newspaper. They each look for articles in categories: sports, politics, world... No interaction occurs about the articles. They write in their journals on the articles they've read as the day draws to an end.

One last bell releases the students for the day and they run out to waiting buses and cars. On this day like any other, Ben has not had a meaningful interaction with any adult at all, or with any student. The students are run by the bells. The bells run the day. The schedule runs the bells. The curriculum runs the schedule. The curriculum conveys a core of knowledge to all kids, divided into career clusters that help them choose electives and aim roughly, though singly, for their future.

Where was personalization?

Ben's day included very few instances of personal engagement, although his school's efforts to individualize learning are evident in the electronic music course, the special education room, and the "Journey of Introspection" in the School-to-Work course. Personalization is not the same as individualization. Personal learning requires the active direction of the student; individualization lets the school tailor the curriculum to scaled assessments of interest and abilities. The difference between individualization and

personalization lies in control. "How much does the student direct the process of his or her own learning?" The answer to that question plays out in student commitment.

Despite Ben's interest in music, media, and nature, events of the school day are organized to fit generalized career tracks, rather than his individual hopes and dreams. The structure and process of the day are controlled by others. If students want to go to college, they comply. If not, they resist, probably without effect. Even Senior Seminar, a required inquiry project, inspires student dread; it is a set of written requirements jammed into a nine-week quarter. And the school's block schedule, designed to promote engagement, has the detrimental effect of forcing kids to change their classes, teachers and acquaintances twice a year, filling their days with strangers who become familiar only when the semester is about to end.

Young adults and their teachers are working in systems such as Ben's that are designed to produce masses of graduates who all meet the same standards. The demand for a uniform "product" from America's schools, measured only by paper-and-pencil tests, contributes directly to student disengagement. Such tests do not evoke or reveal the talents or character traits that support success in most fields of work. The personal attributes that help an individual realize his or her own dreams may remain hidden in the machinery that organizes a conventional school day. Personalization of high school requires systemic change: modification of all the structures and systems that currently support a uniform system of course requirements and procedures. Unless we change the systems that bind us to current practice, the overwhelming force of business as usual will continue to undermine Ben's day and those of millions of others, regardless of what is put in place to personalize learning for each student.

Developmental needs of young adults

During the high school years, young people try to shake off their earlier dependence on adult direction and assume greater autonomy in their lives, often supported by influential peers who are experiencing the same awkward process. The high school years, therefore, bring explosive growth and unprecedented risk. In four years, most students learn to drive, experiment with drugs and alcohol, smoke cigarettes, schedule much of

their own time, and challenge authority in as many ways as possible. As they catapult toward adult rights and responsibilities, those most desperate for freedom can find their liberties curtailed by early pregnancy, drug overdose, delinquency, truancy, and gang membership. Without careful support, the quest for adult identity can become self-limiting and even tragic. To succeed with people who are racing to shape a unique identity that is respected by peers, high schools must organize themselves to support the growth of people who grow increasingly unique as they approach graduation.

In all the comparative studies of high school learning, one conclusion is inescapable: different students learn differently. (Otherwise, the results we get from any test would not distribute themselves over the full range of the normal curve.) Students do not respond in the same way to the experiences we arrange in high schools to support their learning. On norm-based tests such as SATs, or even on standards-based tests such as the New Standards Reference Exam, the same pattern prevails: a few students receive very high scores, a mass scores in the murky middle, and a few hold down the bottom. The students who persistently demonstrate such a wide range of understanding may all have received the same instruction, worked with the same teachers, read through the same texts, and graduated on the same date. Nevertheless, they score high, middle, or low on tests of performance. We may raise average scores among subgroups of students through many kinds of intervention, but the basic shape of the normal curve remains persistent. No matter what hypothesis we test, we must begin by agreeing that students are learning different things in different ways and those differences show up when we look at their test scores. Personalized learning aims to adapt the character of high school education to ensure that all students meet high standards and acquire the knowledge they need to pursue their own aspirations.

Quantitative testing reveals vast differences among students because tests are designed precisely for that purpose, to show differences and support comparison. If the aim of high school education is to compare different students against the same measures, tests give us some insight into the determinants of school success. Race, gender, family background, ethnicity, poverty, and age all figure prominently in comparisons of achievement. The

problem is that most test results provide little insight into the learning processes that make each of us distinctive. We cannot see in test scores the path that leads some students toward acceptable answers but not others. Quantitative tests show us something about the many ways that students are different, but they do little to explain how we can design educational programs to engage each student in learning to develop his or her own unique talents.

Students learn differently because they are different—and they grow more distinctive as they mature (Sizer, 1996). High scoring students often have a reason to learn more academic material, as their prospects for further learning are bright. Students scoring in the murky middle may see no obvious reason for focusing their mental energy on class work, as their purposes are not clear and their prospects are cloudy. Students scoring at the bottom often have a long history of school failure; for them, education has become an unending punishment and they long only to escape, either by resisting authority, by graduating with minimal skills, or by dropping out. The very idea of learning implies moving from what students know to what they do not yet know. Since students cannot begin at the same place, they cannot end at the same place, no matter how intentional or well designed their school may be (Vygotsky, 1928).

In the face of overwhelming evidence that all learning is personal and largely idiosyncratic, we continue to design high schools as if learning were mechanical, uniform, and thoroughly impersonal—as if students respond identically to the experiences they have in school. We have distilled knowledge into discrete subjects, though students express greater interest in ideas and questions than in disciplines. We have divided the school day into discrete periods, one for each subject, with 20-35 students in each class—as if all students are prepared to learn the same material in the same way. On Friday, all students get the same quiz. And surely enough, their quiz scores usually range from A to F, testifying once more that personal variations within the learning mind have greater influence on educational outcomes than all our plans, methods, and glossy materials. Personal aspects of learning affect what is learned and how it is organized for use in each mind. "All new learning depends on prior learning," David Ausubel wrote in 1968. "Ascertain such and teach accordingly." Professional psychologists such as

important studies (Lee, et al., 1995; Newmann, et al., 1992; Stigler & Hiebert, 1999) have pointed to the importance of active participation in learning as a major determinant of performance on tests and in grades. In addition, Scales and Leffert (1999) have combed the research in adolescent growth to identify forty different "developmental assets" that determine the way different students engage learning, among other challenges. Each of these "assets," including family support, parent involvement in school, positive peer influence, time at home, bonding to school, personal power, sense of purpose, and others, is firmly connected to background characteristics and conveys advantages or disadvantages to individual students in a school setting. What approaches to high school structure and process have the power to engage students with such a wide assortment of orientations to learning and life?

The LAB research group set out to "shadow" a representative selection of 24 students in New England high schools where "personalization" had become a priority in school development. They were seeking answers to such questions as:

- When do students engage their minds?
- What activities and interactions engage them in learning?
- How can high schools be organized so all students are engaged and all are learning?

Engagement in learning has become the hallmark of personalized learning. When students are engaged in learning, they are actively applying what they know and searching for ways to know more. The research group reasoned that they could deepen their understanding of personalization by observing specific instances in which students were actively engaged during school. They observed that instances of student engagement were easy to find in the schools they visited; they compiled more than 150 field note entries that radiated excitement and commitment to learning. Here is a sample:

- Students convene in the editing room informally and discuss what they would like to exhibit for the students in the Academy Program who are not familiar with video. A student suggests they make a quick sequence piece in groups and show it to each

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- Students convene in the editing room informally and discuss what they would like to exhibit for the students in the Academy Program who are not familiar with video. A student suggests they make a quick sequence piece in groups and show it to each

other at the end of their time. They agree and are off to it. Mark says he enjoys this the most because he gets to utilize his passions and talents. Bill decides on a topic and shoots his piece with a friend. They are laughing and enjoying this work tremendously. They do not go off task the entire time.

- A group of girls works on the floor of one of the counselor's offices (the PLP coordinator). Two other students enter individually during the period, one to use the counselor's computer, the other to talk with these girls.

- Students are set to the task of performing a fellow student's one-act play, or at least as much as he has so far. Then they are to dress up in costume and *improv* so that he can get ideas for more characters and further plot. A big theatrical brainstorm! Bruce does not volunteer right away but once involved is engaged the entire time. He expands his character and enjoys speaking afterward of why he took the character in those directions. All students are very engaged in these activities and the outcome is brilliant. The student author of the play is thrilled with the potential progress, and together with the rest of the class, he elaborates the plot even further.

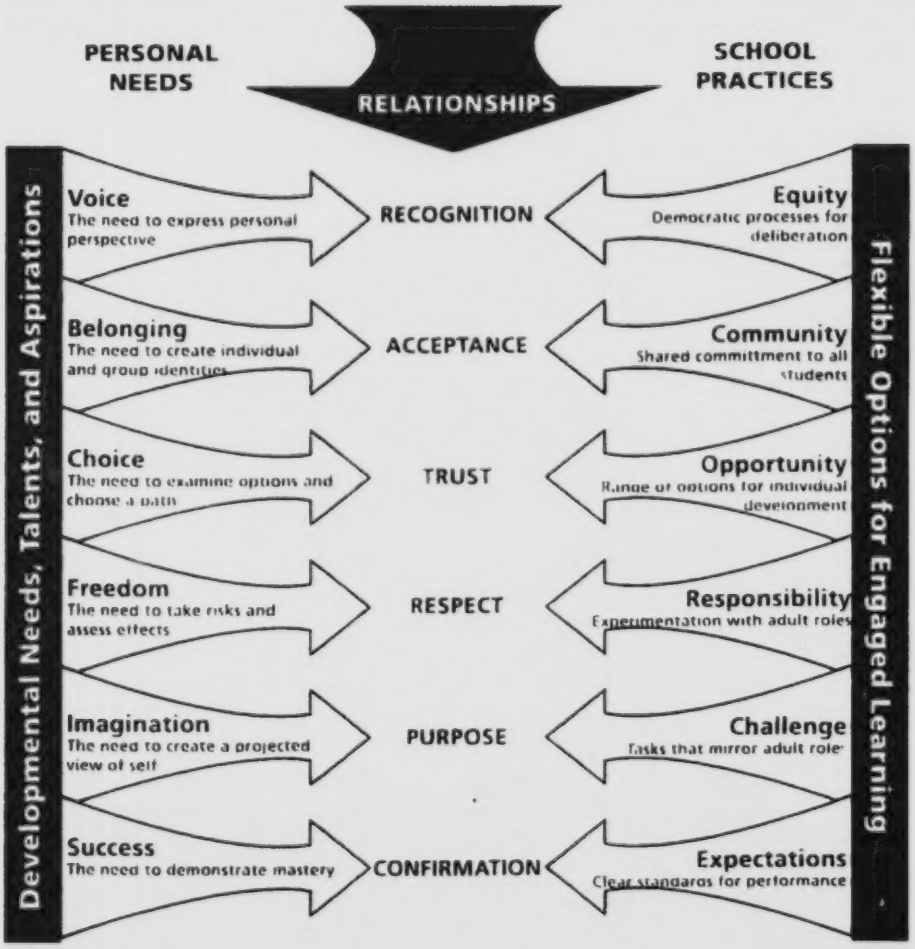
- "In Enterprise.com (a personalized advising course) we have internships like going out and helping the Middlebury College Sports Info Office… like public relations," one student offered. "Also, I went to the elementary school and helped with the Phys Ed class. I really like it 'cause now I know how good it is for you."

- Anyone in the school can do an independent study, they just have to write a proposal and find a faculty advisor. Several girls reference independent studies in bioethics, Japanese, US history (because the students didn't like the standard curriculum), and yoga.

- Lisa and Beth will have a booth on sexual violence information day and hope to get a professional in the field to be there. They debate having a speaker that day—how much can the school take of this topic right off—this topic has never been raised school-wide before.

Images from the shadowing days piled up randomly in the researchers notes. The research team began to sort the events into categories that could reveal the sources of student engagement, the adaptations schools could make to increase engagement, and the interactions between schools and students that characterize "personalized learning." By grouping similar events, they created a hypothetical picture of what a personalized high school would be—a high school experience vastly different from what most educators, parents, and community members might expect or tolerate in their schools.

Figure 1. **Interactions in Personalized Learning**



PERSONAL LEARNING: Using information from the school experience to direct one's own life and to improve the life of the community

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As demonstrated in Figure 1, the researchers identified six developmental needs that were associated with engaged students, six school practices that evoke or respond to those needs, and six characterizations of the interactions between school practices and students that help define "personalized learning." A brief description of these characterizations follows:

Recognition: Personalized learning allows each student to earn recognition—largely from peers but also from teachers, parents, and school leaders. Earning recognition can happen only if each student has many chances in a school day to voice a personal perspective and assert a unique identity. Schools that personalize learning by expanding opportunities for recognition have to develop equitable processes that let many voices be heard and many kinds of success be celebrated. While most high schools prevent inequity by setting uniform expectations, those same practices prevent the majority of students from being recognized for their unique talents. For example, the honor roll, class rank, football lineup, student government, and arts prize allocate recognition only to the few students ranked as the best in predetermined categories. The rest may receive very little recognition during a school day, often lapsing into passive disengagement that barely disguises their disappointment. In at least one of the shadowing study schools, none of the shadowed students received recognition or became engaged during a six-hour day. *Personalized learning depends on earning recognition under expectations designed to allow all to succeed.*

Acceptance: The shadowed students all exhibited delight when their learning became a vehicle for gaining wide acceptance in their school. The need of young adults to belong to a group where they can establish a personal identity has been well described (e.g., Ericson). In the shadowing study, wide acceptance depended on the school's commitment to accepting all students, for whatever talents, ideas, or perspectives they bring to bear on community issues. Comprehensive high schools, however, are often enormous institutions that cannot even fit the whole community into the school gym. For many high school students, gaining acceptance within a group can only be achieved with a small group of 4-5 friends, who then form a self-protective compact or clique in the halls and cafeteria. Some cliques develop a tentative sense of belonging and earn small-scale acceptance by rebelling against the larger community—through

drugs, violence, and habitual truancy. *Personalized learning depends on being able to gain acceptance within the whole school community for productive and distinctive achievements.*

Trust: The shadowed students wanted to be trusted to plan and carry out daily activities and direct their own learning. They wanted to exercise choice, examine their available options, and set their own path on a daily basis. Most high schools limit choice to long-term questions: whether to enroll in physics or not, whether to switch to vocational courses, or whether to write for the newspaper. In highly personalized schools, mutual trust between students and educators was visible hourly—in classes, hallways, and neighborhoods, where individual students were exploring specific tasks from a wide range of options and reporting the results of their inquiry to their teachers and peers. In many comprehensive high schools, the tradition of *in loco parentis*, bolstered by legal requirements for custodial supervision, has replaced trust with specific rules for both faculty and students. Those rules may restrict the growth of trust. *Personalized learning depends on maintaining a wide range of opportunities for students to manage their own learning and direct their own lives.*

Respect: Engaged students in the shadowing study wanted freedom to take some risks on behalf of their aspirations, and the opportunity to earn respect from their peers and from adults in the school. Disrespect in any form incited anger or withdrawal. High school tends to grant at least minimal respect, not for freely designed activities, but for compliance with existing rules and expectations. The student who says little in class but completes homework assignments regularly and prepares well for tests and quizzes earns the gratitude of teachers and administrators—and a modicum of respect. Students who press with questions, push their own perspective, act out in defiance of authority, and ignore rules of behavior earn disrespect. *Personalized learning allows students to earn respect from teachers and peers by asking their own questions and pursuing their own answers, even against the tide of opinion.*

Purpose: The engaged students in the shadowing study were confident that high school offered a clear way for them to fulfill their own purposes by adhering to the school's declared purpose. They could use their daily work in classes, school activities, and commu-

nity learning experiences to imagine themselves leading successful adult lives. In a subject-based curriculum, knowledge of facts and ideas is often represented without adult applications and without reference to the adult world where knowledge truly makes a difference. Unless it is connected to problems and opportunities in the community at large, high school classes seem irrelevant and boring. *Personalized learning provides students with challenges that mirror the tasks and challenges of adult life.*

Confirmation: Engaged students in the study used their daily work to confirm their sense of progress toward personal goals. They needed to see small instances of success in order to understand that they were moving toward their longer-term goals. Being able to demonstrate mastery of skills or knowledge, particularly when their effort could support others working on similar challenges, increased their confidence and often opened new avenues for exploration. In the classrooms visited during the study, students could succeed by generating a unique response to a challenge, not by repeating the success of others. High school classes in which students all seek the same "right answer" prevent students from recognizing how they can use knowledge to make a difference in their lives and the lives of others. *Personalized learning celebrates the unique achievements of individuals against broad standards shared by the whole community.*

Following the shadowing study, the researchers observed that personalized learning was neither a psychological event (a phenomenon of the mind) nor a sociological event (a phenomenon of school structure). Personalized learning always occurred in the interaction between individual students and school events designed to evoke a wide variety of different responses. In personalized classrooms, teachers were active in designing, organizing, and explaining the challenges students faced, but they were equally active in supporting students, each of whom might be pursuing a different path toward meeting a challenge. The key to understanding personalized learning lay in understanding the interactions between students and their educators.

Using the study's synthesized field notes, the research team defined personalization as a learning process in which schools help students assess their

own talents and aspirations, plan a pathway toward their own purposes, work cooperatively with others on challenging tasks, maintain a record of their explorations, and demonstrate their learning against clear standards in a wide variety of media, all with the close support of adult mentors and guides.

The researchers observed that engagement occurs when individual students recognize a connection between the skills and knowledge promoted at school and the vision they have begun to form for their lives in the larger community. Engagement supports growth when each student can express and test an evolving perspective against challenges that grow increasingly complex as the years progress.

The "developmental needs" identified on the left side of Figure 1 are powerful drivers for learning, if they are activated and supported. None of these developmental needs were different from what we might expect from developmental theory and research (Piaget, 1964; Vygotsky, 1926; Ericson, Gardner, 1990; McCarthy, 1994; Scales & Leffert, 1999). And few personalized practices were different from what we might expect from Coalition of Essential Schools reports (Sizer, 1984, 1992, 1995; Meier, 1995; Steinberg, 2001; Levine, 2002). In short, practices that offered opportunities for personalized learning were flexible enough to allow change to occur in unique individuals who were, in fact, growing more unique and more engaged with others during each interaction in their school day.

The structural attributes of schools on the right side of Figure 1 allow a wide spectrum of responses, particularly if "standards" are defined as skills and knowledge required for adult success. Because high schools have grown to be large and impersonal—increasing the need for direct "management" of school life—educators expend great effort trying to suppress interaction, rather than promote it. Didactic teaching, norm-based testing, punitive discipline systems, Carnegie units, and locked doors that separate students from their community may make the school day manageable, but they also prevent the interactions that form the foundation of adolescent and young adult growth. From this perspective, high schools have been designed in ways that prevent them from serving their central purpose.

Most high schools describe their mission using such words as equity, community, opportunity, responsibility, challenge, and expectation. The researchers were greatly surprised to see that these common words took on new meaning when associated with the apparent needs and interests of the students they observed. Taken as a group, students became engaged in learning when they worked on projects related to their own life goals. They worked well with teachers and administrators when those adults could guide them through analyzing the complexities of the challenges they faced. When students, teachers, and administrators were all simultaneously engaged in pursuing their goals, a school began to resemble the ideal of a "learning community" (Senge, 1990). As Theodore Sizer wrote in 1996, "The heart of schooling is found in relationships between students, teacher, and ideas. Kids differ, and serious ideas affect each one in often interestingly different ways, especially as that child matures" (1996, p xiii).

Demanding adult freedoms, our shadowed students were learning to be responsible by taking on challenges that were increasingly complex, requiring independent thinking and the creative application of facts, skills, and ideas. They were learning to mark success, not by recalling right answers, but by assembling knowledge into workable plans and novel presentations. Their need for voice, belonging, choice, freedom, imagination, and success did not disrupt the school day. Instead, aspects of the school day had been deliberately designed to respond to their need to express and test their approach to understanding academic content. Personalizing learning for all students within a conventional high school setting may depend on helping the whole school community revise its understanding of long-held beliefs and values, then changing the practices that restrict student engagement so the whole school can personalize learning for each student.

Personalizing to reduce disengagement

Two competing needs divide public education: 1) the need to ensure that all citizens can participate actively in a democratic society and, 2) the need to prepare a much smaller number for leadership positions in a wide spectrum of crucial services and industries. The typical comprehensive high school attempts to serve both purposes with the same basic curriculum—a collection of subject area courses derived from the academic disciplines that

organize higher education. Perhaps 25% of high school seniors go on to complete a college diploma. The remaining 75% often complete their high school studies uninspired by any purpose—or just drop out (Newmann, Wehlage & Lamborn, 1992). High schools may serve the democratic purpose by offering students the same school, but the curriculum and most school conventions are designed to help a minority compete for college placement. As students discover that school is designed to benefit someone else, they gradually withdraw their efforts.

Dropping out is only one visible symptom of wider disengagement that may characterize a majority of high school students. Measured as the percent of 16–24-year-olds who are not graduates and not in school, the dropout rate ranges from 10–12.5% (USGAO, 2002). The GAO estimate of "dropout," however, excludes those students who dropped out but later earner a GED certificate. Measured as the number of high school diplomas awarded in any year divided by the number of freshmen who began high school four years earlier, the dropout rate is approximately 33%. Whether the dropout rate is 12% or 33%, the numbers of dropouts in the US reaches several million each year. When asked why they dropped out of school, a sample of students in a Rhode Island high school with a 45% dropout rate seemed to agree that high school must be for somebody else. Almost every one of them felt that school didn't care about "kids like me." They felt that teachers, and particularly administrators, cared about some other group or groups of students much more than their group (DiMartino, 1997). Disengaged students may not be able to see any connection between their high school experience and their future roles as independent adults in the community.

Following the publication of Horace's Compromise (Sizer, 1984), high school educators began to question the structures and processes they had developed to organize their professional lives. Teachers such as Horace began to see that the routines of school life were eroding their own drive. They also began to see that institutional distance from their students threatened to erode the central purpose of the teaching profession—to prepare each student with the necessary knowledge to live well in a complex society. In response to this growing recognition, the Coalition of Essential Schools began developing a network of small schools where personalized

learning was the hallmark. Such schools experimented with student advisories, student-led conferencing, personal learning plans, community-based learning, dual college enrollment, graduation exhibitions, portfolios, and a number of related strategies for preparing students to direct their own learning and work collaboratively with others. Although their students come from the same backgrounds as students who typically drop out, Coalition Schools often report completion rates of 95%, with 95% college attendance after graduation (Meier, 1995; Steinberg, 2001; Levine, 2002). In smaller settings, Coalition Schools discovered that personalized learning could engage all students in learning if the whole school organization was designed to meet that purpose.

Despite the Coalition and smaller schools movement, however, large impersonal high schools continue to dominate American secondary education. Recognizing the need to enliven large, comprehensive high schools, the National Association of Secondary School Principals (NASSP) publicized the need for high school personalization in 1996, with *Breaking Ranks: Changing an American Institution*, which recommended ways to personalize the high school experience for each enrolled student. Subsequently, states such as Maine, Vermont, and Rhode Island have issued recommendations to "abolish anonymity" in their schools. Across the country, teachers and administrators have begun to look seriously at indicators of student disengagement in their schools and design ways to engage each student in pursuing particular goals.

A century of incremental growth, however, has frozen in place an elaborate system of interconnected parts, and one aspect of high school learning cannot be changed without changing them all (Sizer, 1996). Now, high schools designed to be large, comprehensive institutions have begun the laborious task of peeling away policies and practices that standardized the high school experience 50 years ago. Smaller Schools, Academies, Pilot Schools, Magnet Schools, and some Charter Schools have begun to show that clear purpose and personalized practice can engage more students and increase success rates. Still, transforming large high schools designed to deliver a standardized process into smaller schools that personalize learning is not at all the same as creating a small school from scratch. Looking at the idea of personalized learning, derived in part from successful Coalition

schools, may point to a variety of strategies large schools can use to increase both engagement and achievement.

What is a personalized high school?

Personalized learning occurs when high schools make deliberate efforts to design educational experiences that fit the needs, goals, talents, and interests of their students. Each student enters high school with uniquely constructed attitudes, skills, and knowledge. To succeed with individual students who are unique, the people and programs that successfully engage those students have to be ready to adjust educational opportunities to fit a wide range of personal orientations. In personalized learning, high schools do not present all students with the same array of learning opportunities—they design processes and practices that shape academic knowledge to the trajectory of growth already established in the individual. If high schools aim to improve learning for all students, and each student learns differently, then high school systems based on uniformity must be transformed into systems that celebrate diversity, and redesign their thinking to promote a wide array of student achievements.

Ideas behind personalized learning seem relatively simple:

- Personalized schools promote the achievement of standards for all students.
- Personalized learning begins with individual interests so each student becomes engaged in learning.
- Teachers get to know each student's strengths, weaknesses, and interests.
- With school support over four years, students become self-directed learners who can use learning to manage their lives.
- As students pursue an increasingly independent pathway, parents become true guides and mentors in the learning experience.
- As students explore real options for their futures in the community, community members become involved in the schools in a meaningful way.

- Adults in the school model and benefit from stronger professional and student relationships.
- Against common standards, students learn to set goals and measure success for themselves.
- Students graduate upon demonstrating high performance in a variety of media, not simply norm-based tests.
- Reaching all students depends on reaching each one.

(DiMartino, 2001)

Applying these ideas, however, is hardly simple. Over 100 years, high schools have assumed a bureaucratic structure based largely on divisions between academic disciplines. By slow accretion, norms, rules, schedules, teaching strategies, and a host of related practices formed around the idea that knowledge is a uniform "body" and all students should aim to acquire it the same way. In addition, constructivist teaching practices—hands-on investigations that build on what students already know—are the foundation of personalized learning and require highly skilled teachers working within a re-cultured high school setting (Windschitl, 2002). Reforming schools so students learn how to manage their own lives in a complex social and economic context means we need to re-examine all the rules and all the practices, not in a single burst, but through collaborative professional inquiry over a long period of time.

Discussion Clips on Personalization
Citations from Research and Theory

Personalized Learning is the effort on the part of a school to organize learning environments to take into account individual student voice, characteristics, and needs, including family characteristics and needs, and to make use of flexible instruction and multiple assessment practices (Keefe & Jenkins, 2002).

Personalized Learning means teachers and students share responsibility for learning based upon their mutual understanding of their needs and aspirations. Educators know and develop a relationship with each student and his/her family. That knowledge and relationship is then used to collaboratively plan and direct that young person's education.... Together, teachers and students determine and agree to learning opportunities, instructional choices, and assessment criteria (Prairie, 2002).

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Personalized environments engender the most fundamental sort of accountability. For better or worse, neither teachers nor students can hide in a personalized environment. In part, this accountability is interpersonal, an obligation or contract between teachers and students that is similar to those in other personal relationships (McLaughlin & Talbert, 1990).

The experience of these Met students also raises a second critical question: What if disengaged learners did not have to spend so many years moving step by step through subject matter that does not seem relevant to them and which they feel discouraged about learning? If schools were more inventive and flexible in playing with the sequences of learning experiences, disengaged learners might develop more of a "need to know" and become more motivated to engage in academic work (Steinberg, 2001).

High schools must break into units of no more than 600 students, so that teachers and students can get to know each other better. Then teachers should use a variety of instructional strategies that accommodate individual learning styles and engage students. This will be helped by every student having a Personal Adult Advocate and a Personal Plan for Progress (NASSP, 1996, p. 5).

Only two groups of kids—each a small minority—are able to join the subgroup where the adults are significant people to them. These are 1) the academic stars...and 2) the star athletes.... The faculties know these kids well; they share common values and aspirations; and the kids and teachers thrive on their mutual admiration and respect. Occasionally there are subschools for [the arts]. But the vast majority of kids—probably 70-80 percent—belong to enclaves that include no grown-ups (Meier, 1996).

Every teacher tailors learning experiences to the learner's needs, interests, and future goals...(Maine Commission on Secondary Education, 1998).

Truly personalized learning requires reorganizing schools to start with the student, not the subject matter. There cannot be a uniform curriculum for every student in the country. Information is growing and changing too fast. It is too hard to respect the priorities of different cultures with one curriculum. School that takes personalized education to its full potential is less concerned with what knowledge is acquired and more interested in how that knowledge is used (Littke & Allen, 1999).

A school ought to be a magical place where you are queen or king, and where what you get to do is focus on your intellect, and on what you can accomplish as a human being, and you come to understand what your life can be. That's what school should be for children. Not a place where you go to study for a standardized test. Not a place where you go where you hear every day about the problems that you are. Not a place where you go where people tell you that you are under-performing. Not a place where you go where people tell you that you are part of some pathology (Ruth Simmons, Inaugural Address, Brown University, 2001).

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What might a personalized high school look like? It might show evidence of some of the following activities, all observed during the shadowing study as the seven schools worked in their own ways toward personalizing learning for each student:

Examples of Personalization in Schools	
Personal learning plans	Community based learning
Service learning	Foxfire classrooms
Inclusive practices	MAPS (student action plans)
Varied instruction	Portfolios of student work
Senior projects	Independent studies/ student presentations
Career explorations	Community mentoring
Applied learning	Extra time and help available from teachers
Student choice in courses and class work	Seminar-based instruction/ Socratic seminars
Teaching and learning teams	Democratic classrooms
Flexible scheduling	Heterogeneous grouping
Small schools	Small classrooms
No bells	Adult/student relationships sustained over years
No class interruptions	Adults addressed by their first names
Advisory groups & parent conferences	Guidance/teacher partnerships
Teachers and kids eating together	Accessible counseling staff
Home visits	Special education available to everyone
Community of learners emphasized	Teachers and students as co-learners
Community meetings	Shared mission and goals

A list such as this cannot become a recipe; it can, however, represent various avenues a school can explore to increase adult/student interaction and create the expectation of involvement for each student.

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Pursuing these types of strategies and activities may increase student engagement, but how do they affect performance? Valerie Lee and her colleagues at the University of Wisconsin designed a study to assess the influence of 30 practices associated with 820 high schools on NAEP scores from the NELS data base (National Education Longitudinal Study) (Lee & Smith, 1994). High schools that implemented more than three of the 30 studied practices reported consistently higher achievement than conventional schools operating within a bureaucratic structure. Furthermore, schools adopting three or more of the following "restructuring" practices scored higher than more conventional schools:

- Students keep the same homeroom throughout high school
- Emphasis on staff solving school problems
- Parents volunteer in school
- Interdisciplinary teaching teams
- Independent study in English/social studies
- Mixed ability classes in math/science
- Cooperative learning focus
- Student evaluation of teachers
- Independent study in math/science
- Teacher teams have flexible planning time
- Flexible time for classes

In Lee's analysis, students in smaller schools also scored higher than students in larger schools. The effects of restructuring school practices appeared to increase between grades 9-10 and 11-12 (Lee, Smith & Croninger, 1995). The factors listed above are also associated with personalized learning.

In a subsequent study of 12,000 students from 850 high schools using the same restructuring indicators, Lee and Smith also found that students from

different racial or economic backgrounds scored higher on NAEP tests in English, mathematics, science, and history than comparable students in conventional schools (2001, p. 74). (The one exception was that higher SES white students in conventional classrooms scored higher in history than students in restructured schools.) Restructuring practices were also related to increased student engagement and decreased behavioral problems. The pattern of her results led Lee to suggest that 600 students may be the optimal size of high schools.

When Newmann and Wehlage published their final report on the Wisconsin restructuring study (1995), they associated four factors with increased student achievement, all of which are also features of what has emerged as personalized learning:

- Authentic instruction
- Common curriculum
- Collective responsibility
- Academic press

Authentic instruction poses real-life problems for students to solve, problems that do not yield to an easy, "one shot" application of a single skill. A *common curriculum* focuses student attention on essential knowledge and skills, asking different students to use information to understand themselves and their content. With a few curricular aims in view, students and all teachers take *collective responsibility* for the health of their community. *Academic press*, the force of academic influence on daily life, lends a seriousness of purpose to each school day, often with a common vocabulary and a shared sense of expectation. Between grades 8-10 and 10-12, these factors could account for the following achievement gains in mathematics and sciences:

Authentic instruction:	from 50-100% higher
Common curriculum:	from 46-100% higher
Collective responsibility:	from 54-137% higher
Academic press:	from 38-60% higher

(Sizer, 1995, p. 166)

When such features are prominent, students may find it easier to get engaged in learning and use knowledge to direct their own lives.

Why Change the Whole System?

As the shadowing study researchers analyzed their observations, they became increasingly interested in the patterns that formed in the data, but they also became deeply concerned that high schools moving toward personalized learning would experience terrible strain at virtually all levels of school organization.

Activities that engage students in learning tend to challenge the basic structures, practices, and procedures that educators use to make high school an orderly, predictable, and even safe environment. These activities also shift a large proportion of control over learning from the experienced hands of classroom teachers and school administrators into student hands—young hands that are highly energetic, deeply curious, and largely untested by experience with adult challenges. In short, they saw that the school change teams pursuing personalization would be playing at the edge of order and disorder for an extended period of time, while students, faculty, school service personnel, parents, district administrators, and school board members relearned most of what they thought they knew about high school teaching and learning (Wheatley, 1994).

Unlike many of the recommendations for high school reform introduced in the last 50 years, authentic instruction, collective responsibility, common curriculum, and academic press are not simple add-ons; instead they imply a radical restructuring of the mechanical systems that now organize high school learning. In a similar way, Lee's list of factors associated with improved achievement rely on assumptions and structures that currently have little play in the organization of high school learning.

Mixed ability classes, for example, work best when teachers use authentic tasks to organize learning, allowing students to pursue different answers to complex questions. Interdisciplinary teaching teams work only when teachers have the time and support to identify common themes, rethink their subject areas around focusing questions, and design projects that call upon two or more disciplines (Clarke & Agne, 1997). Flexible classes are possible only when a teaching team controls the schedule for their shared students. In short, a system designed to support content acquisition for

tracked classes of 30 students in an eight-period day cannot shift easily to personalized learning. Personalized learning depends on engaging a whole school of students, teachers, administrators, and community members in revising their school to engage each student in learning. Personalized high schools result from systemic change.

What is systemic change? Mechanical conceptions have dominated most discussion of the current school reform effort. If we see systems as mechanical, we begin to imagine simple interventions that aim to change the course of events in one stroke: insisting that graduates pass a test; requiring all students to take the SAT; or, establishing a dress code (Cohen, 1995). Mechanical systems obey mechanical laws, creating the illusion that fixing one small component in the system will fix the whole process.

> *While alluring in their simplicity, mechanical conceptions of school change run counter to the experience of most educators, who have learned to view all activity in school as deeply human, subject to the baffling complexity that permeates most human endeavors. By adhering to a mechanistic conception of systems while thinking about school change, we blind ourselves to the subtle processes that make improved learning a real possibility in the living human organisms called schools. (Clarke, 1999)*

High school systems are human systems. Consequently, change follows the patterns of organic growth rather than mechanical reliability (Morris, 1997; Clarke, 1999). Viewed as an organic adaptation to new challenges, systemic change becomes just another kind of learning, developed by many people doing different kinds of work for the same purpose: improving learning for young adults.

Personalizing the high school experience for students creates a series of dilemmas for educators. Most students become deeply engaged only when they see opportunities in the school day to expand and test their own ideas. The typical high school curriculum, in contrast, puts heavy emphasis on absorbing the ideas of others in fields of knowledge that become increasingly more intricate as students move toward graduation. Student engage-

ment depends on access to events that will let them demonstrate their unique gifts: knowledge, perspective, personality, and belief. High school continuity currently depends on uniform expectations for all students: rules, requirements, schedules, and standards. If the factors that both promote student engagement and improve performance are antithetical to the structures we use to organize the school day, high school educators pursuing personalized learning face one more seemingly impossible task: making sure the school works reliably while creating new opportunities for students to design and carry out a personalized exploration of knowledge.

A recent study by Linda Darling Hammond, Jacqueline Ancess, and Susanna Ort (2002) testifies both to the difficulty of personalizing high school systems and to the promise of systemic change for improved learning outcomes. Darling-Hammond and her colleagues studied change in student outcomes when a large, urban high school in New York was replaced by six smaller schools designed to personalize learning. The Coalition Campus Schools Project compared measures of success for the original Julia Richmond High School (1992-1993) with the same measures for the six smaller, personalized schools that replaced it (1995-1996).

Student Outcomes

	Julia Richmond High School	CCSP Average
	1992-1993	1995-1996
Average daily attendance	72%	86.2%
Incident rates (disciplinary)	3.3	1.2
1 year dropout rates	6.1	1.2
Students with reading gains	52.4%	56.9%
11th grade passing RCT or regents		
in reading	79%	80%
in mathematics	57.5%	76.6%
in writing	75.2%	71.4%
LEP students with adequate language gains	53%	91.2%

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A similar pattern of outcomes appears when the percentage of CCSP students (general education) passing Regents Examinations is compared to percentages passing in schools demographically similar to CCSP but conventional in structure and size.

Students Passing Regents Examinations 1996-1997

	Similar School	CCSP Average
Passing reading	82.4%	93.6%***
Passing writing	70.4	85%***
Passing mathematics	81.2%	79.4%

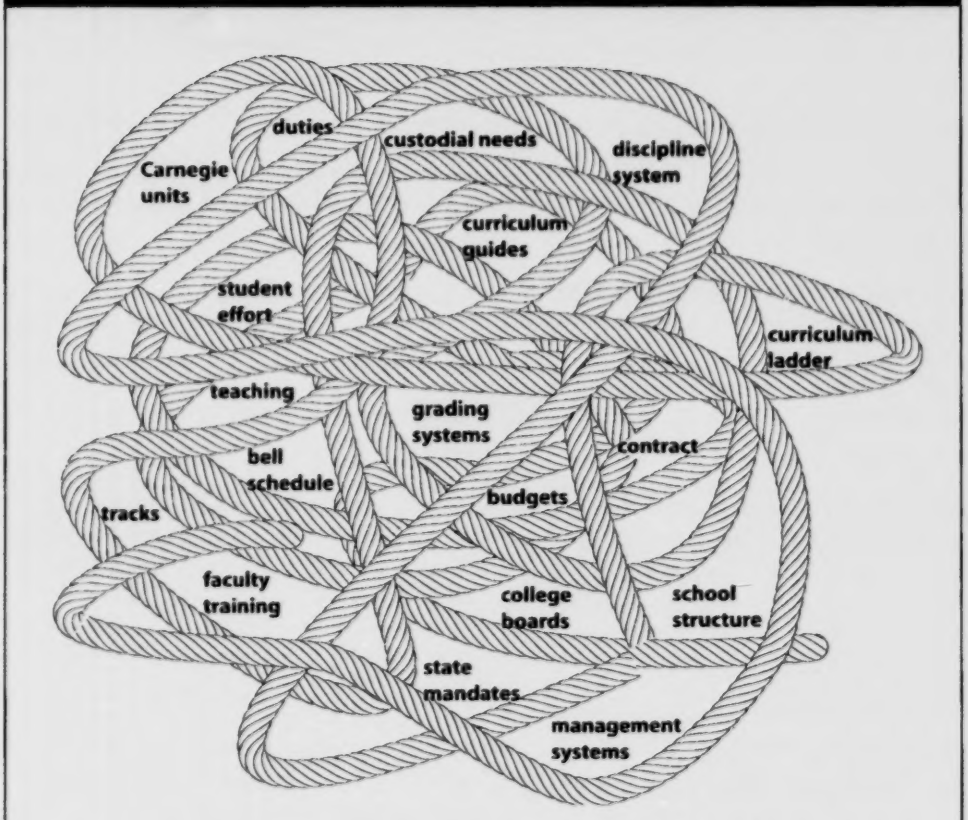
*** $p < .001$

The data appear paradoxical. Personalizing the high school experience (by increasing autonomy) reduced the level of disciplinary infraction. Focusing more on student goals increased scores in areas of basic knowledge. Apparently, responding to adolescents' needs for responsibility, recognition, and freedom increased their level of compliance with school expectations. The schools that emerged from the discontinued Julia Richmond High School capitalized on small size, personalization of learning, small classes and pupil loads, dependable advisory systems, a purposeful and coherent curriculum, teaching that responded to individual preferences and skills, and an approach to assessment based on individual portfolios and exhibitions. The surrounding educational system, however, remained largely intact, posing problems that required the personal intervention of a specially designated superintendent for Alternative Education. Many Coalition schools remain isolated from the mainstream, despite years of demonstrated success.

"You can't change any one part of the system without changing them all" (Sizer, 1995). The challenge is intimidating. No single individual in any school system has access to the cranks and levers that can change the whole

system. Separately, teachers and administrators might adapt what they do to improve different parts of the system, but unless their efforts are organized to support a shared vision of how school should be, the chance of conflict and disorder rises as their effort increases. Because professional time is almost completely dedicated to teaching, no time exists in a conventional school day for educators to get together for dreaming and planning. As Figure 2 shows, to compound the problem, the existing structure consists of many interdependent parts, any one of which can forestall change in parts of the system to which they are related (Clarke & Agne, 1997).

Figure 2. The Interdependence of Parts in a Frozen System



Discussion Clips on Systemic Change
Citations from Theory and Research

Systemic reform now stands for thinking of a new way to provide education, not merely fixing the system we have inherited. This is a break from almost a century of practice, with its dependence on hierarchical bureaucracy. Given the inadequacies of the current system, the fresh conversation is a source of hope (Sizer, 1996, p. 48).

In buildings bursting with energetic kids, adults fear chaos above all other threats. Often, we try to suppress the problems that arise in school life, rather than solve them. Consequently, the public school stands as a monument to predictable order, but not necessarily to the purpose for which it was established, appropriate learning for all students (Clarke, et al., 1998).

A school or system that resolutely accepts the lively but annoying diversity among its students must break away from many deeply ingrained notions about the keeping of school... Schools must adapt to the legitimate differences among students; these adaptations themselves will be in constant flux (Sizer, 1999, p. 11).

Discontinuities in policy can undermine schools' efforts to stabilize their efforts and create internal accountability. Discontinuities also undermine practitioner commitment to change. As experienced staff in many districts often comments about recurring waves of reform, "Been there. Done that." Or "We tried that and it didn't last" (Darling-Hammond & Ort, 2002).

Before we began our interviews and observations, we thought we would be looking at "new" strategies for improving high school learning. Perhaps our first discovery was that none of the innovations were, in fact, new. The word "innovation" tends to obscure their character and the processes by which they grew into their current forms. Each had a history of development stretching far back into the distant past (Lee et al., 1995).

The process of change is hardly additive. Instead, each addition to a growing reform is subject to change as soon as it is incorporated into an ongoing reform initiative. The innovation must change in response to the environment that it is itself intended to modify (Morris, 1997, p. 24).

Though flexible, a self-organizing structure is no mere passive reactor to external fluctuations. As it matures and stabilizes, it becomes more efficient in its use of its resources, and better able to exist within its environment. It establishes a basic structure that supports the development of the system. This structure then facilitates an insulation from the environment that protects it from constant, reactive changes (Wheatley, 1994).

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The idea of interdependence of the parts—the idea that changing a part affects many or all other related parts—is central to the concept of a system (Morris, 1997).

Change strategies rooted in the natural networks of teachers—in their professional associations—may be more effective than strategies that adhere solely to the delivery structure outlined by the policy system (Lee et al., 1995, p. 15).

The change agent study demonstrated that the nature, amount, and pace of change at the local level was a product of local factors that were largely beyond the control of high-level policy makers...We have learned that we cannot mandate what matters to effective practice; the challenge lies in understanding how policy can enable and facilitate it (McLaughlin, p. 12, 15).

Innovation is fostered by information gathered from new connections; from insights gained by journeys into other disciplines or places; from active collegial networks and fluid, open boundaries. Innovation arises from ongoing circles of exchange, where information is not just accumulated or stored, but created (Wheatley, 1994).

Studying systemic high school reform

To understand how successful change occurs in a high school, another research team from the LAB at Brown set out to describe processes that support successful change in conventional high school settings (Clarke, et al., 2000). The research team identified an innovation in high school teaching in each of five high schools in Vermont. Each innovation represents a personalized learning strategy, for example, a media lab in which students create PSA videos for airing on local TV, or a geography unit in which students design and defend a plan for the development of 100 acres of local land, or personal learning plans at a city high school. By observing and interviewing the educators who had participated in such changes, the team identified specific events that had played a critical role in successful change initiatives and categorized those events into five different levels of high school organization:

- Events engaging students in learning
- Events engaging teachers
- Events engaging school administrators
- Events involving district administrators
- Events involving the State Department of education

Interviews allowed the team to track events supporting successful change over six years and create "maps" of the events connected to personalization. On those maps, the evolution of a personalized learning project depended on events occurring simultaneously at all levels of school organization, from classroom to statehouse. If people at any organizational level failed to interact, the innovation quickly began to starve. When all levels of organization were interacting, the innovation grew. Most critical to program growth were interactions across the boundaries erected to maintain the organization: departmental divisions, administrators/teacher divisions, and state policy/implementation divisions. Crossing organizational lines to support change was the mark of success on all five school maps. Most notably, the interactions that fueled the growth of all innovations was steady interaction of teachers and students inside and outside the classroom, allowing the innovative program to evolve at the same time the system changed to support growth. Successful change depended on active interaction between and among all levels of the school organization stretching over the entire period of study, or longer. Change had grown successfully in these high schools through a pattern of ongoing interaction among students, teachers, administrators, parents, and community members—all with the purpose of improving student learning. To sustain personalized learning, the whole system has to be engaged in an ongoing dialogue about improved student learning (Clarke, 2003).

When the maps from different schools were compared, the conclusion seemed obvious: innovations in teaching and learning could "grow" only when the surrounding system was feeding them support (Clarke, 1999). The study gave credence to the idea of a learning organization, a school where students and teachers pursue complex questions that reach far into the community, attracting the interest and endorsement of parents and administrators who share the same vision of what school should be. Events that create interaction among students, teachers, administrators, and community members—with student learning as the focus—form the basis for further events and further invention. New innovations spring from the seeds of prior innovation. As innovations proliferate, school structures change their shape to allow further growth. As school structures adapt, they create the space for innovations that could not be imagined under earlier

conditions. High schools grow toward reform when all the parts interact constantly, forming an organism flexible enough to adapt to the pace of change in the surrounding environment.

The researchers found that the patterns of change across all levels of the system were encouraging, but also foreboding. The human energy necessary to initiate change might already be accessible in the schools and excitement about the innovation might be high, but school structures had been designed intentionally to keep people from interacting with each other. Schedules, subject areas, tracks, and specialized administrative roles created orderly compartments for the school day that also prevented people with similar interests from talking with each other. Crossing boundaries between levels of the system was hazardous—and very rare in some of the schools in the study. The inability or unwillingness of people at any level of the system to interact with others at different levels starved healthy innovations of the resources they needed to grow. In the most energetic schools, interactions among people at different levels were built into the day. In schools where innovation would eventually fail, interactions among people at different levels were more random, subject to interruption by any of a thousand daily crises.

Different levels of the educational system, however, may influence student achievement to a different extent. Wang, Haertal, and Walberg (1993) designed an elaborate procedure for measuring the differential influence of various factors on school achievement. They derived measures of influence from more than 60 studies of student achievement, then used a panel to complete a meta-analysis of those studies, producing a list of influences on learning ranked from most powerful to least powerful. On a comparative scale, five factors appeared to exert the greatest degree of influence on learning:

Proximal Factors

Classroom management	64.8
Meta-cognitive factors	63
Cognitive factors	61.3
Home environment/support	58.4
Student/teacher interactions	56.7

In relation to the six levels of organization proposed in these workshops, all five factors are associated either with the personal experience of the students (meta-cognitive and cognitive factors) or with interactions among students and supportive adults (management, home environment, and student/teacher interactions). The researchers concluded that the most powerful influence on student achievement came from influences very close to the daily experience of students.

In the same study, another set of factors played a contributing role in student achievement. The least influential factors included:

Distal (Distant) Factors	
Program demographics	42.1
School demographics	41.4
State and district policies	37.0
School policy and organization	36.5
District demographics	32.9

The research team did not conclude that "distal" factors, those most removed from student experience, were of little consequence, but that more contextual or systemic influences must provide support for factors much closer to the student experience. We can infer that systemic change improves student achievement when daily student experiences are shaped by systemic factors supporting personal engagement in learning. Changing the personal experience of high school students is essential to achievement gains, but student experience is also shaped by influences far beyond the classroom.

As systems struggle to adapt, pressure toward depersonalization from within a high school is relentless. In fact, the daily press of different needs within a large school may be sufficiently strong enough to prevent a team from guiding any long-term change initiative. Many high school educators spend very long days managing their kids and classes and tending to the daily flow of people streaming through their door. A high school day brings a cacophony of disparate voices, each charged with the passionate commitment of the speaker.

Sometimes, a few well-publicized ideas, like the following three guiding principles posted on nearly every wall at Fenway High School in Boston,

can help members of the school community focus on solving problems and taking on new challenges:

1 *Work hard.*
2 *Be yourself.*
3 *Do the right thing.*

The principal wrote and adhered to these rules, but so did teachers, administrators, and community members, forming the basis of a strong learning community.

A convergence of reform ideas

A number of researchers have noted the convergence of ideas that is occurring in relation to high school reform. While exploration is ranging widely among a multitude of specific techniques, consensus seems to be gathering around four major organizing ideas (Legters, Balfanz & McPartland, 2002).

High Standards. There is widespread agreement that high schools must hold all students to high academic standards. This implies that high schools eliminate the practice of sorting students into college-bound, general, and vocational tracks.

Personalization. Research shows that one of the most important factors behind student success in high school, especially that of disadvantaged students, is a close connection with at least one adult who demonstrates caring and concern for the student's advancement.

Relevance. (Curriculum should) emphasize the integration of real-world applications and career themes into academic work, (using) interdisciplinary and project-based activities that integrate computer and telecommunications technology and form stronger linkages between course content and students' everyday lives.

Flexibility with Instructional Strategies. Reformers find common ground in their recommendations to increase teachers' repertoire of instructional approaches to reach a greater number of students.

The central proposition unifying these four ideas is that high schools can improve the learning of all students by holding a clear set of standards constant, supporting each individual with a caring adult, then adjusting the curricular path and instructional approach to engage personal talents and goals.

The National Association of Secondary School Principals (NASSP) set out a more detailed agenda for comprehensive high school reform in 1996 with the publication of *Breaking Ranks: Changing an American Institution.* The nine major purposes promoted by *Breaking Ranks* emphasize that high schools should prepare each student to use academic learning to prepare for adult life in an increasingly interdependent world. As listed in Figure 3, 32 of more than 80 specific recommendations pertain to personalizing the high school experience so each student can choose among multiple pathways toward his or her own future.

As Figure 3 also shows, attending to personalization requires school principals to engage the full expanse of the school system, from personal plans for progress to faculty advising, personalized teaching, curriculum integration, flexible systems, expanded leadership, and the cultivation of a learning community. Introducing Personal Learning Plans, for example, depends on enlisting a teaching faculty in academic advising, preparing teachers to use authentic tasks in the classroom, reorganizing the school day to include time for PLPs and authentic tasks, adjusting the schedule so students have time for authentic tasks and teachers have time for advising, reframing the teaching contract to allow advising, finding room for advising meetings and project development, engaging parents in supporting student projects, and persuading the school board and community that personalizing learning will be worth the investment. The challenge crosses all the boundaries that divide high schools into enclaves.

Figure 3. Criteria for Aligning High School Systems to Personalized Learning

Derived from *Breaking Ranks, Changing an American Institution*, NASSP, 1996

Chap.	No.	Personalized Learning
01	06	Each student will have a Personal Plan for Progress to ensure that the high school takes individual needs into consideration and to allow students, within reasonable parameters, to design their own methods for learning in an effort to meet high standards.
03	02	Experiences in high school will acknowledge multiple talents and ways of learning to help students achieve the meaningful success that leads to further achievement.
06	01	The high school will assess the academic progress of students in a variety of ways so that a clear and valid picture emerges of what they know and are able to do.
06	02	The school will review each student's Personal Plan for Progress continually and indicate the extent of progress toward graduation and post secondary transition plans.

Chap.	No.	The Power of Advisories
03	03	Every high school student will have a Personal Adult Advocate to help him or her personalize the educational experience.
02	03	Teachers will be adept at acting as coaches and facilitators to promote more active student involvement of students in their own learning.
03	04	The school will accord meaningful roles in the decision-making process to students, parents, and members of the staff to promote an atmosphere of participation, responsibility, and ownership.
02	05	Teachers will convey a sense of caring to their students so that their students feel that their teachers share a stake in their learning.

Chap.	No.	Teaching to Each Student
01	03	Teachers will design work for students that is of high enough quality to engage them, cause them to persist, and when successfully completed, result in their satisfaction and their acquisition of learning skills and abilities valued by society.
02	02	Teachers will know and be able to use a variety of strategies and settings that identify and accommodate individual learning styles and engage students.
02	04	Teachers will teach in ways that help students to develop into competent problem solvers and critical thinkers.
02	07	Teachers will integrate assessment into instruction so that assessment does not merely measure students, but becomes part of the learning process.

Chap.	No.	Integrating Curriculum to Meet Standards
01	01	Each high school will identify a set of essential learnings—above all, in literature and language, mathematics, social studies, science, and the arts—in which students must demonstrate achievement in order to graduate.
01	02	The high school will integrate its curriculum to the extent possible and emphasize depth over breadth of coverage.
01	04	The content of the curriculum, where practical, should connect to real-life applications of knowledge and skills to help students link their education to the future.
04	02	Schools will make technology integral to curriculum, instruction, and assessment, accommodating different learning styles and helping teachers to individualize the learning process.
05	06	Each high school will present alternatives to tracking and to ability grouping without restricting the range of courses and learning experiences it offers.
08	02	The curriculum will expose students to a rich array of viewpoints, perspectives, and experiences.
12	07	The high school will require each student to participate in a service program in the community or in the school itself that has educational value.

Chap.	No.	Flexible Systems and Leadership Roles
01	05	Assessment of student learning will align itself with the curriculum so that students' progress is measured by what is taught.
05	03	High schools will develop flexible scheduling that allows for more varied uses of time in order to meet the requirements of the core curriculum.
13	06	Teachers will provide the leadership essential to the success of reform, collaborating with others in the educational community to redefine the role of the teacher and to identify sources of support for that redefined role.
13	01	The principal will provide leadership in the high school community by building and maintaining a vision, direction, and focus for student learning.
13	03	Current principals will build and refine the skills required to lead and manage change.
13	04	The principal will foster an atmosphere that encourages teachers to take risks to meet the needs of students.

Chap.	No.	Engaging the Whole Community
05	01	High schools will create small units in which anonymity is banished.
07	01	Every high school will be a learning community for teachers and the other professionals it employs.
07	02	Each educator will create a Personal Learning Plan that addresses his or her need to grow, stressing knowledge and skills related to improved student learning.
08	04	The school will offer its staff substantive, ongoing professional development to help them deal with issues of diversity.
12	01	A high school will regard itself as a community in which members of the staff collaborate to develop and implement the school's learning goals.
07	05	The support staff of a high school—secretaries, custodians, cafeteria workers, and others—will also be encouraged and assisted in their own career growth and drawn into the larger school community as adults who can promote the well-being of students.

High schools across the country are making progress toward each of these recommendations, but we know of none that has managed to complete them all. Recognizing the need to radically change the American high school, several states have organized concerted efforts to personalize the high school experience. Several school districts in the northeast have joined the LAB at Brown as *Breaking Ranks* high schools, using the recommendations in Figure 3 to begin and sustain systemic change. Following NASSP's recommendation that "high schools will create small units in which anonymity is banished" (*Breaking Ranks*, p. 45), Maine's Department of Education published *Promising Futures: A Call to Improve Learning for Maine's Secondary Students* in 1998. Maine established a center in the Department of Education to support the personalization initiative and allocated all of its CSRD funds to schools willing to develop personalized learning. Following Maine's lead, Vermont's Department of Education published *High Schools on the Move* (2002), with 12 principles that help define a personalized high school experience. And Rhode Island has recently announced guidelines for personalizing its high schools and is experimenting widely with promising ways to engage all students by adapting practice to the needs of each one.

School change teams in the middle

Each member of a school community lives at the center of a system that cannot improve until the whole system begins adjusting itself to engage each student in learning. High school principals do not control the system. Neither do teachers, school boards, or federal agencies. The shadowing study showed the LAB research team that personalizing the high school experience was possible, but exceedingly rare because so many facets of school life have to change to support it.

To engage all students in learning, school boards and government agencies must develop policies that permit different students to succeed in school by demonstrating that they can use academic knowledge to solve practical problems. District administrators must reduce their priority on uniform practices across schools to allow different schools to develop successful methods for engaging uniquely directed students. Educators in high schools must reduce their reliance on familiar structures and systems that restrict

active inquiry by students and teachers alike. Teachers must radically revise their self-conceptions, guiding each student through personalized learning rather than broadcasting knowledge to all students as if they were identical in all respects. Most prominently, students must come to see that they cannot succeed in high school by remaining passive recipients of knowledge, waiting for the arrival of graduation day. Existing structures may bring comfort to all parties, but they do not promote engagement.

During its school visits, the LAB team began to notice that school change teams could play the central role in a school change initiative, spreading responsibility for personalization throughout the school community. A school change team can cultivate a learning community by initiating personalization strategies in any part of the school, connecting those activities to others that share a purpose, recognizing and responding to stress that mounts up in neighboring parts of the system, and celebrating accomplishment broadly when anyone succeeds in contributing to growth. With support and guidance, leadership may pervade the whole school.

School change teams may be the only way for high schools to develop, monitor, and adjust progressive change toward school personalization. To compensate for the lack of time, school change teams usually meet over an extended period of months or years (Clarke, et al., 1998). To compensate for lack of control over parts of the system, their members usually come from different departments and administrative offices in their school. To modify the frustration that occurs when change falters or falls, they must develop a unifying sense of purpose and support each other when any project starts to collapse. In short, the interaction factors that describe personalized learning in Figure 1 may also describe productive interactions in a school change team. Working successfully, a school change team becomes a small learning community nested in a larger community, which must also begin to "learn" for school personalization to succeed (Senge, 1993). The discussion that follows, as well as the six workshops that make up this guide, are designed to encourage interaction among all six levels of high school organization, with personalized learning as the focus of inquiry.

Unlike earlier reform strategies, high school personalization does not come with a reliable recipe. Each school has to begin with an assessment of its existing programs to engage students in shaping their own futures. Each school has to begin adaptation by developing first steps based on the school's existing strengths. Unlike most "whole school" change strategies, personalization does not depend on a single organizing tactic, such as comparing test scores over time across programs or beginning "small schools" restructuring. Many renowned models for personalization do exist, such as the Met High School in Providence, Fenway High School in Boston, and University Heights or Central Park East in New York City, among others, but these models of personalization vary considerably (see Appendix for examples of schools personalizing learning). Fenway High School thrives on the sense of community that students, teachers and administrators use to anchor their decisions. The Met High School relies on a four-year process of community-based learning sending students across the city of Providence to gather information and use it to solve problems. Central Park East depends a great deal on its portfolio system, in which students are continuously gathering evidence that they have met seven core expectations. Personalization is not a uniform process built with the same bricks. Each high school still has to sift through many options and variants to locate features that fit the local situation.

When faculty, students, and staff have begun to interact as a learning community, however, the prospects for personalization are not prohibitively difficult. Like the recommendations in *Breaking Ranks*, practices that personalize learning are internally consistent and interdependent. Success with any single project usually leads inexorably toward the next challenge. As success accumulates within a school, students, faculty, parents, and community members begin to share a new understanding of how high schools can work to engage all students in learning. The most important step is to begin the inquiry, "How can we engage all students in learning?" Pioneers in the Coalition of Essential Schools have shown how small schools can engage students in learning; educators in larger, conventional high schools now face a similar challenge.

Without engagement, there is no learning. We hope the six characterizations of personalized learning from the shadowing study help members of school change teams monitor and manage their work together, growing toward the dynamism of a learning community. We also hope the 32 *Breaking Ranks* recommendations give team members a way to see how their own efforts relate to the work of others, so they can increase engagement throughout the school. And we have designed six workshops as part of *Changing Systems to Personalize Learning* to help produce solutions to the most pressing problems a school may face when undertaking this work. It is more likely, however, that the workshops will increase a team's capacity to discover or develop its own strategy. These workshops, described in the next section, aim to spread the best of what we know about personalized learning, advising, teaching, curriculum, systems, and community engagement, but their most important effect may be to help educators discover how to work together to grow a learning community in a high school setting.

About the Workshops

Six workshops on high school change

The *Changing Systems to Personalize Learning* workshops were designed to help school change teams understand the following strategies for personalization at each level of the system, and to plan an approach to change that will engage people at each level. Each workshop corresponds to one of the six levels of organization portrayed as an onion in Figure 4, derived in part from "Circles of Support" (Newmann & Wehlage, 1995; Sizer, 1996, p. 170; Clarke et al., 2000).

Figure 4. **Changing Systems to Personalize Learning**

Engaging the Whole Community
Developing shared values through community engagement
Flexible Systems & Leadership Roles
Adapting school organization to promote personalization strategies
Integrating Curriculum to Meet Standards
Connecting academic knowledge to real-life problems and opportunities
Teaching to Each Student
Fitting instruction to student goals, talents, and stylistic preferences
The Power of Advisories
Creating relationships fundamental to the learning process
Personalized Learning
Planning to meet personal aspirations and common standards

Personalizing learning for each student depends on personalizing all aspects of the educational system.

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All six workshops in this series can be chosen in any order, depending on the personalization needs of the school.

Personalized Learning. In depersonalized high schools, students have learned to remain passive or even invisible, shifting responsibility for their learning—or failure to learn—into the hands of their teachers and school administrators. *Students in personalized high schools create products that represent, in diverse ways, the shared vision of the whole learning community; by acquiring and applying knowledge in ways that realize their personal goals, they stretch the hopes the school community holds for all its members.*

→ This workshop prepares a team to understand the scope of personalization and how to get students involved in designing a pathway toward their own futures using Personal Learning Plans and Student-Led Conferences.

The Power of Advisories. In conventional practice, high school teachers receive a license to teach within a specific discipline or subject area, then join a department that shares their particular background and teach within their subject area all day long. Facing the frustration of seeing students succeed unevenly in their classes, often reinforced by test scores ranging across the normal curve, many teachers resign themselves to failure. "I taught but they didn't learn." *Teachers in personalized high schools recognize personal advising as a form of teaching that prevents anonymity, guiding students through planful action designed to help them use knowledge to realize their hopes.*

→ This workshop helps a team develop ways to introduce an adult advocate into the life of every student to help guide student planning, learning, and assessment.

Teaching to Each Student. District curricula and professional organizations often emphasize the amount of content to be covered within a course or subject area. For punctilious teachers, the year can become a race to get past the Civil War, or the chapter introducing calculus, or the last novel on the required

list. *Teachers in personalized high schools prepare students to set their own goals, gather skills and knowledge needed for success, and express their unique accomplishments so others expand their own sense of what is possible.*

→ This workshop introduces teaching methods that allow students with different skills, aspirations, and interests to succeed in meeting the same standards.

Integrating Curriculum to Meet Standards. Seeing separate subjects as isolated from each other, students and many teachers miss opportunities to apply learning to real situations. Lacking contact with the adult world, many also fail to see that problems and creative opportunities in adult life demand knowledge applied flexibly from many realms at once. *Educators in personalized high schools look for ways for students and teachers to develop and demonstrate their work in public settings, where knowing something actually makes a difference.*

→ This workshop presents several strategies in curriculum design that will help students link academic learning to academic standards and adult roles in the community.

Flexible Systems and Leadership Roles. Maintaining a uniform system of practices and requirements costs an enormous amount of strain, particularly when only a few school administrators are burdened with the authority to solve problems. Creating leadership opportunities for all members of the high school community can reduce the press administrators feel when they alone face all the problems a school full of students and teachers can generate in one day. *Principals in personalized high schools greatly enliven the spirit of the school by empowering individuals with concerns to work with others to develop solutions and plans.*

→ This workshop uses activities to prepare team members to recognize the need for change in existing systems of high school organization and to develop new leadership roles that help them adjust school structures.

Engaging the Whole Community. It is difficult to form a school community when only a few can earn respect by being the best in a limited number of categories or fields of endeavor. High schools become learning communities when they celebrate the distinctive work of many separate individuals in a variety of areas on behalf of hopes that are shared by all. *Members of a personalized high school community use daily success of groups and individuals to expand the vision the school community holds for itself.*

→ This workshop helps change teams design a strategy for engaging the whole community in developing a vision of personalized learning that will sustain a long-term change process.

Although a school change team may begin school personalization by focusing attention at any level, helping people at other levels adapt to new initiatives quickly becomes a priority. In light of research and theory, it is likely that personalizing learning for each student depends on personalizing the whole system—creating a learning community that grows stronger as its members solve the problems they face.

The workshops included in this packet are anchored to the 32 *Breaking Ranks* recommendations as shown in Figure 3, which describe specific approaches to high school personalization (NASSP, 1996). With *Breaking Ranks* as background, the workshop series is designed to help high school educators adapt existing systems so all students can plan their own learning pathways, remain engaged in their studies, and go on to enter productive adult roles. The workshops may prove most valuable when a whole high school decides to personalize learning, or when smaller teams of educators, students, and parents use them to look at the current situation in their high school and plan changes that increase student engagement.

Looking at the whole system

Each layer of an organization is embedded in another layer, as shown in Figure 4, so change initiated at any single level tends to rebound through adjacent levels, creating new and often unpredictable challenges at each step. Personalizing the high school experience is a dynamic process in

which small innovations may slowly flow together, engendering large-scale transformations across the system. Blockages between levels of the system, or even within these six levels, are inevitable—and always frustrating.

Because the challenge of systemic change is so formidable, we have advised educators working on high school personalization through these workshops to constitute a school change team. The workshops have been designed in such a way that the change team may include all the faculty, staff, and department heads in a single high school, or several teams from different high schools. School change teams work best when they include district-level educators and a wide variety of teachers and service personnel with students who can use their personal experience to test new ideas. School-wide change teams can help ensure that modifications being developed in one part of the school are congruous with simultaneous changes in other parts.

More commonly, the change team involved in these workshops will be smaller: 5-10 people with a deep commitment to improving learning who may not represent all the parts of the existing system. Smaller change teams often evolve into steering groups, providing leadership and continuity over the life of a change initiative. Tracking and managing systemic change is not possible for any individual within the system; only through regular discussion within a committed team can the complexities of change become manageable (Clarke, et al., 1998).

Five workshop components

By their nature, workshops cannot present a compendium of all we know about any topic, particularly topics as broadly conceived as these six areas. These workshops are designed to be both research-based and practical in the hands of professional educators. Each workshop includes an introduction, with definitions and background research that clarify the focus, followed by five sections that support team decision-making and design:

Purpose. Teams will examine different perspectives on the issue at hand, then use research and theory to assert their own organizing purpose.

Organization. Teams will examine different ways of organizing an initiative.

Content. Teams will examine a range of strategies for personalizing learning, and then choose or adapt an approach that fits their school situation.

Assessment. Teams will consider ways to monitor progress in personalization and sketch an assessment plan.

Leadership. Teams will assess ways to lead a school toward personalization and develop leadership roles to keep personalization moving and growing.

Personalizing high school learning cannot be accomplished by following the steps of any recipe. High school change teams, with particular understanding of their own schools, will need to design their own strategies for activating each level of the system to support personalization practices. By learning to see how layers of the system interact, a change team can become skilled in adjusting small parts of the system and preparing the whole structure to support personalized learning for each student and each adult within the school. These workshops are designed to support change teams through this process and help them develop and modify a systemic change strategy over an extended period of time (McLaughlin, 1990).

Workshops and what else?

Workshops do not change schools. People, working together toward a shared purpose, change schools. Forming a close working team is surely the first step in high school personalization. Workshops may play a part in developing a general strategy, but successful change depends on the work of many individuals who begin to adapt their practice to fit an emerging view of what happens when students become engaged in learning. When many people are experimenting with new roles and communicating their discoveries and frustrations regularly, change can grow within the school community. Because time and human energy within any school are usually fully committed to daily teaching and management, a changing high school also must engage people from outside the school in supportive ways. Beyond workshops and faculty meetings, the following list includes the kind of

activities high schools have developed to sustain a long-term change initiative:

- community forums
- teacher study groups
- graduate student research
- public presentations
- parent involvement
- contract negotiations
- grants proposals
- higher ed partnerships
- business partnerships
- road trips
- admin engagement
- steering groups
- graduate level courses
- school board meetings
- student exhibitions
- pilot projects
- budget proposals
- schedule adjustments
- DOE partnerships
- conference attendance
- change consultation
- admin leadership/vision

The Education Alliance/LAB at Brown University is committed to helping school change teams create their own strategy to personalize learning for each high school student and each member of their school community. Through the *Changing Systems to Personalize Learning* workshops, change teams can increase their understanding of personalized learning, discover how to adapt existing practices to improve student engagement, and learn ways to create a high school environment that focuses foremost on the personal success of every student.

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Appendix:
Examples of Schools Personalizing Learning

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The schools shared their experiences related to high school redesign and restructuring, specific approaches and reforms that did or did not work, how their schools have managed the changes and innovations, and recommendations for success.

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Examples of Schools Personalizing Learning

The following schools participated in the Secondary Schools Showcase organized by the Education Alliance/LAB at Brown University in January, 2003. The Showcase brought twenty schools, all working toward personalized learning in various parts of the country, to Providence, Rhode Island for a day of discussion about the successes and challenges of undertaking this work. The schools shared their experiences related to high school redesign and restructuring, specific approaches and reforms that did or did not work, how their schools have managed the changes and innovations, and recommendations for success.

School: North Reading High School (North Reading, MA)

Type: Public High School

Total Enrollment: 600

Personalization Programs in Place: North Reading High School has created a student-centered high school personalized in programs, support services, and intellectual rigor.

Challenges: Redesigning the schedule, reorganizing the leadership structure, and working to improve teacher methodology.

Contact Information:
Kiki Papagiotas, Principal
(978) 664-7800

School: Fenway High School (Boston, MA)

Type: Pilot School within Boston Public Schools

Total Enrollment: 270

Personalization Programs in Place: Fenway High School's mission is to create a socially committed and morally responsible community of learners, which values its students as individuals.

- Small size, which values personalized relationships between teachers and students.
- Collaboration: Teachers work together and meet frequently to discuss the needs of students and make decisions regarding curriculum, assessment, classroom practice and advisory activities.
- Continuity: Students are grouped into "Houses"—each with its own faculty and support staff. Students are well known by their teachers and form strong bonds with their classmates.
- Curriculum: Flexible curriculum; assess student work in a variety of ways.

Challenges:

- Size: Both total student enrollment and size of faculty are important variables if a school wants the flexibility to make changes.
- Culture and Tradition: Changing the way things have always been done creates concern. Also, small schools within a larger school may come up with their own autonomy.
- Time and Space: Physical environment, curriculum, scheduling.

Contact Information:

Larry Myatt
(617) 635-9911
174 Ipswich Street
Boston, MA 02215

School: Wyandotte High School (Kansas City, Kansas)

Type: Public, Urban

Total Enrollment: 1330

Personalization Programs in Place: In 1997, the large high school divided into eight small learning communities with different themes. Teams of 7 teachers with one lead teacher would serve 150-200 students. The small learning communities succeeded in developing relationships: teacher collaboration, knowing students well, and involving families in a student's success.

Challenges: Allowing for flexible allocation of available resources, including people, facilities, time, and funds. Having every team of teachers work together successfully.

Contact Information:
2501 Minnesota Avenue
Kansas City, Kansas 66102
(913) 627-7650
Principal: Walter Thompson

School: Brighton High School (Brighton, MA)

Type: Public, "Compass School"

Total Enrollment: 1200

Personalization Programs in Place: The mission at Brighton High School is to provide connected and personalized teaching and learning. Brighton High School reformed a large high school into small learning communities where teachers know students well, and the teachers work collaboratively through common planning time, developing promising practices, looking at student work, and discussing rubrics and alternative forms of assessment.

Challenges: In Brighton High School's transformation to small learning communities, scheduling, communication, and teacher buy-in have been the biggest challenges.

Contact Information:
25 Warren Street
Brighton, MA 02135
Headmaster: Charles Skidmore

School: Rex Putnam High School (Milwaukie, Oregon)

Type of School: Comprehensive

Total Enrollment: 1300

Personalization Programs in Place: Rex Putnam is a school "Connected to Students - Committed to Learning." Rex Putnam High School restructured in 1997 into small learning communities for the 9th and 10th grades in order to:

- Personalize learning: "My teachers know me."
- Establish connectedness: "I belong to a group."
- Create a sense of accountability: "I can't let my team down."
- Become statistically sound: Better attendance, academic performance, and behavior.

Challenges: Some of the challenges encountered while implementing small learning communities: scheduling, teacher buy-in, consistency, and licensure of endorsements.

Contact Information:
http://putnam.nclack.k12.or.us/

School: Malden High School (Malden, MA)

Type: Public

Total Enrollment: 1600

Personalization Programs in Place: Restructured into a school within a school model in order to better meet the needs of students by personalizing the learning process and eliminating the idea that it is a big anonymous high school without accountability for student achievement.

Challenges: The school is currently facing questions related to: leveling, scheduling, transition programs from 8th grade to high school, and teacher buy-in.

Contact Information:
77 Salem Street
Malden, MA 02148
(781) 397-7223
Principal: Peter Lueke

School: Kingwood High School (Houston, TX)

Type: Public

Total Enrollment: 3800+

Personalization Programs in Place: "Everything is big in Texas... We make it personal."

Reorganized into small learning communities to enhance student's achievement in a more personalized environment for both students and staff. The reform has been successful due to a supportive schedule, low teacher turnover rates, and a strong advisory program.

Challenges:

- Assumed teachers knew how to work collaboratively—difference between cooperating and collaborating.
- Not all teachers bought into the program... but slowly, the critical mass of teachers in favor of the reform and accepting the new programs are finding value in the principal's choices.

Contact Information:
Principal: Paula Almond
(281) 641-6901

School: Noble High School (North Berwick, Maine)

Type of School: Public

Total Enrollment: 1200

Personalization Programs in Place: Noble High School reformed into small learning communities as a response to the low test scores, high dropout rates, and low college application, acceptance, and retainment rates that previously troubled the school. Students are divided into houses, there is a flexible schedule, and teachers are given common planning time and professional development.

Challenges: Scheduling and teacher engagement in cooperative learning and teaching.

Contact Information:
388 Somersworth Road
North Berwick, Maine 03906
(207) 676-2843

School: South Boston High School (Boston, MA)

Type: Public

Total Enrollment: 1000+ (divided into 3 schools of 380)

Personalization Programs in Place: The structure of having three small schools within the umbrella of South Boston High School is the school's greatest strength. Each high school, which serves about 380 students, is further broken down into small learning communities in order to meet the academic, social, and emotional needs of the students. Students have been given more support, know there is a group of adults who care about their success, and schools are safer, more organized, and focused.

Challenges:

- The district still sees the school as one building, and hence, one big school versus 3 autonomous schools.
- Issues with the teachers union.
- Integrating bilingual students.

Contact Information:
95 G Street
South Boston, MA 02127
(617) 635-9857

School: Poland Regional High School (Poland, Maine)

School Type: Regional

Total Enrollment: 583

Personalization Programs in Place: The school mission statement reads: 'to teach all students to use their minds well and to cultivate their particular talents.' This is achieved through a series of changes to pursue personalization:

- Advising: Same advisor for 4 years, meet daily.
- Curriculum: High expectations, heterogeneous grouping, co-curricular participation.
- Personalized learning and teaching: Students are looped in 9th and 10th grade teams to reinforce the importance of student-teacher relationships.

- Assessment: Competency requirements for graduation.
- School culture and leadership: Professional culture for teachers—common planning time, professional development, and strong faculty relationships. All faculty members are stakeholders in decision-making and governance decisions.

Challenges: Difficulties in maintaining consistency in grading, developing a system of common assessments, and challenging all students.

Contact Information:
1457 Maine Street
Poland, Maine 04274
(207) 998-5400
www.poland-hs.u29.k12.me.us
Principal: Derek Pierce

School: Roosevelt High School (Yonkers, NY)

Type: Magnet, Bilingual School

Total Enrollment: 1509

Personalization Programs in Place: Roosevelt High School is the only bilingual high school in the district, therefore all English language learners are sent to this school. The goals of the program are to increase parent and community involvement, increase use of technology, and staff training. Students and teachers are organized into teams and remain with these teams for four years.

Challenges: Finding ways to reach out to families and the community.

Contact Information:
631 Tuckahoe Road
Yonkers, NY 10710
(914) 376-8500

School: Souhegan High School (Amherst, MA)

Type of School: Public

Total Enrollment: 1000

Personalization Programs in Place: At Souhegan, personalization in school is a democratic system in both philosophy and structure whereby students are encouraged to express their views and participate in a school governance system that gives them formal power in the Community Council.

Challenges: The development of a democratic approach to school decision-making was a process that required a major investment of time and personnel and challenged the school to find appropriate balances of power.

Contact Information:
P.O Box 1152; 412 Boston Post Road
Amherst, NH 03031
(603) 673-9940
Principal: Ted Hall

School: Cambridge Ringe and Latin School (Cambridge, MA)

Type of School: Public (only public high school in Cambridge)

Total Enrollment: 2000

Personalization Programs in Place: Cambridge Ringe and Latin School serves an extremely diverse population of students and has undergone restructuring from one large high school into five smaller learning communities. The personalization programs were organized by breaking the large school into 5 smaller schools, building a strong 4-year advisory program, creating a schedule where each teacher is responsible for approximately 80 students, and providing teachers with collaborative planning time and professional development.

Challenges:

- Limitations of the building in creating five small learning communities.
- Teacher buy-in, parent support.
- Political concerns and frustrations regarding drastic, immediate changes.
- Having everyone (students, faculty, parents, community) support the vision of heterogeneous grouping and lack of choice in terms of placement into a school.

Contact Information:
459 Broadway
Cambridge, MA 02138
(617) 349-6400

School: The New York City Lab School (New York, NY)

Type of School: Public

Total Enrollment: 350

Personalization Programs in Place: A collaborative process of teaching and learning is intrinsic to the program. Achieving high standards of academic success is not enough; they agree that students and teachers need to work together to support advanced learning in the classroom.

Challenges: Constant collaboration and cooperation between teachers, students, parents, and staff.

Contact Information:
333 West 17th Street, New York, 10011
Phone: (212) 691-6119
Co-Directors: Sheila Breslaw, Rob Menken

School: Boston Arts Academy (Boston, MA)

School Type: Pilot Boston Public School

Total Enrollment: 620

Personalization Programs in Place: The Academy seeks a student body that is passionate about the arts, that works and learns together as a community, and that reflects the diversity of the city of Boston. Teachers have complete autonomy to create their working conditions, schedule, and curriculum. Teachers were the primary resource in the evolution of the school.

Challenges:

- Whether the school is adequately preparing students for the rigors and challenges of academics at the college level, and the question of continuity within the curriculum.
- Because students are admitted to the school based on artistic talents and not grades, the school struggles with having varied academic levels in the classroom.
- There are inconstancies with grading portfolios and student work.

Contact Information:
Linda Nathan
(617) 635-6470
174 Ipswich Street
Boston, MA 02115

School: The Metropolitan Regional Career and Technical Center "The Met" (Providence, RI)

School Type: Alternative

Total Enrollment: By 2005, The Met will house 110 students at each of its six small schools throughout Providence.

Personalization Programs in Place: "The Met philosophy is grounded in educating one student at a time. We promote and create personalized education programs that are unique for each student. We believe that true learning takes place when each student is

an active participant in his or her education, when his or her course of study is personalized by teachers, parents and mentors who know him or her well, and when school-based learning is blended with outside experiences that heighten the student's interest."

Challenges: The Met is far from a traditional school—there are no classes, tests or grades. However, learning at The Met is based on student interests, every student is responsible for public exhibitions, and the world is used as a classroom.

Contact Information:
www.metcenter.org or www.bigpicture.org
webmaster@bigpicture.org

School: Champion Charter School (Brockton, MA)

School Type: Charter

Total Enrollment: 100 (ages 16-21 who have left the Brockton Public School and are permanent residents of Brockton).

Personalization Programs in Place: The Champion Charter School is a high school specifically designed for out-of-school youth. The Champion Charter School offers project-based curriculum and competency-based assessments based on the Diploma Plus Curricular Model. The students receive high school diplomas and split their time between the classroom and a work-based learning program that emphasizes life skills and peer support. Classes are small; there is a low student-to-teacher ratio, and an ability to provide for various learning styles. School is accountable to students and their families and community.

Challenges: Meeting the needs of out-of-school youth.

Contact Information:
Curtis Wells, School Director
Larry DeSalvatore, Assistant Director
Champion Charter School
One Center Street, 4th Floor
Brockton, MA 02301

School: Sir Francis Drake High School (San Anselmo, California)

School Type: Public, suburban

Total Enrollment: 1030

Personalization Programs in Place: The school believes that by personalizing learning, providing academic and emotional support, and developing and designing powerful instruction, the students will meet academic and social outcomes. Project-based learning is a major component of reform. Regardless of the path they choose, whether it is a small learning community or a traditional pathway, students are cared for. The school embraces an interdisciplinary approach to education and links instruction with the student's passion.

Challenges: The challenges during their reform have been scheduling and teacher buy-in.

Contact Information:
Sir Francis Drake High School
1327 Sir Francis Drake Boulevard
San Anselmo, CA 94115
(415) 453-8770
www.drake.marin.k12.ca.us

School: The Urban Academy (New York, NY)

School Type: Transfer School

Total Enrollment: 120

Personalization Programs in Place: The Urban Academy challenges students and has succeeded in implementing inquiry-based teaching and learning. Students are able to use the city as their classroom, attend seminar style classes, and participate in a community service program.

Challenges: Not a traditional approach to education.

Contact Information:
Urban Academy
317 E. 67th Street
New York, NY 10021
212-570-5284
www.urbanacademy.org

School: Mount Abraham Union High School (Bristol, VT)

School Type: Public, Rural

Total Enrollment: 920

Personalization Programs in Place: At Mount Abraham Union High School, students are engaged learners who are responsible for and actively involved in their own learning. The school creates small, personalized, and safe learning environments that enable students to get stable support from adults, have caring connections to mentors, and have a sense of belonging. The schedule is flexible to allow time for varied instructional activities and integrated learning experience. Students develop their own personal learning plans.

Challenges: Engaging the family and community in the student's goals. Providing teachers with the support to guide the personal learning plan process.

Contact Information:
Anne Friedrichs (802) 453-2333
John Clarke (802) 453-2681

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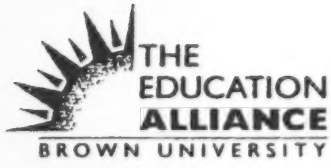

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